

Refine Search

Search Results -

Terms	Documents
L2 same select\$3	8

Database:

US Pre-Grant Publication Full-Text Database
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Search:

L3

Refine Search

Recall Text  Clear  Interrupt 

Search History

DATE: Friday, January 20, 2006 [Printable Copy](#) [Create Case](#)**Set Name Query**

side by side

DB=PGPB; PLUR=YES; OP=OR

	<u>Hit Count</u>	<u>Set Name</u>
	result set	
<u>L3</u> L2 same select\$3	8	<u>L3</u>
<u>L2</u> L1 same (chip or IC or "integrated circuit")	71	<u>L2</u>
<u>L1</u> (memory adj1 (card or board)) near10 (USB or "universal serial bus")	1181	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L1 and L4	3

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L5	Refine Search
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Recall Text  **Clear** **Interrupt**

Search History

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Set Name **Query**

side by side

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

	Hit Count	Set Name
	result set	
<u>L5</u>	11 and L4	3 <u>L5</u>
<u>L4</u>	L3 same select\$3	19 <u>L4</u>
<u>L3</u>	L2 same (chip or IC or "integrated circuit")	180 <u>L3</u>
<u>L2</u>	(memory adj1 (card or board)) same (USB or "universal serial bus")	2366 <u>L2</u>
<u>L1</u>	439/638,639.ccls.	1023 <u>L1</u>

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L2 same select\$3	0

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Search:

L5	Refine Search	
<input type="text"/>	<input type="button"/>	
<input type="button" value="Recall Text"/>	<input type="button" value="Clear"/>	<input type="button" value="Interrupt"/>

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side by side

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

<u>Set Name</u>	<u>Hit Count</u>	<u>Query</u>
L5	0	L5

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

<u>Set Name</u>	<u>Hit Count</u>	<u>Query</u>
L4	8	L4

DB=PGPB; PLUR=YES; OP=OR

<u>Set Name</u>	<u>Hit Count</u>	<u>Query</u>
L3	8	L3

<u>Set Name</u>	<u>Hit Count</u>	<u>Query</u>
L2	71	L2

<u>Set Name</u>	<u>Hit Count</u>	<u>Query</u>
L1	1181	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
(439/59 439/79 439/945 361/684 361/686 361/737 710/300 710/301 710/302 710/303 710/62 710/74 710/313 710/316 711/100 711/103).ccls.	10318

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Set Name Query

side by side

Hit Count Set Name

result set

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L6 710/300-303,62,74,313,316;711/100,103;361/684,686,737;439/59,79,945.ccls. 10318 L6

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L5 L2 same select\$3 0 L5

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L4 L2 same select\$3 8 L4

DB=PGPB; PLUR=YES; OP=OR

L3 L2 same select\$3 8 L3

L2 L1 same (chip or IC or "integrated circuit") 71 L2

L1 (memory adj1 (card or board)) near10 (USB or "universal serial bus") 1181 L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L2 and L6	13

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Search History

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Set Name Query

side by side

Hit Count Set Name

result set

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L7 L2 and L6

13 L7

L6 710/300-303,62,74,313,316;711/100,103;361/684,686,737;439/59,79,945.ccls.

10318 L6

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L5 L2 same select\$3

0 L5

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L4 L2 same select\$3

8 L4

DB=PGPB; PLUR=YES; OP=OR

L3 L2 same select\$3

8 L3

L2 L1 same (chip or IC or "integrated circuit")

71 L2

L1 (memory adj1 (card or board)) near10 (USB or "universal serial bus")

1181 L1

END OF SEARCH HISTORY

EAST - [Untitled1:1]

File View Edit Tools Window Help

Minimize Maximize Close

Drafts

Pending

Active

L1: (408) (memory adj1

L2: (32) 11 same (chip

L3: (1) 12 same select\$3

Failed

Saved

Favorites

Tagged (0)

UDC

Queue

Trash

Search | Go back | Previous | Next | Stop | Help

DBs USPAT

Plurals

Default operator: OR

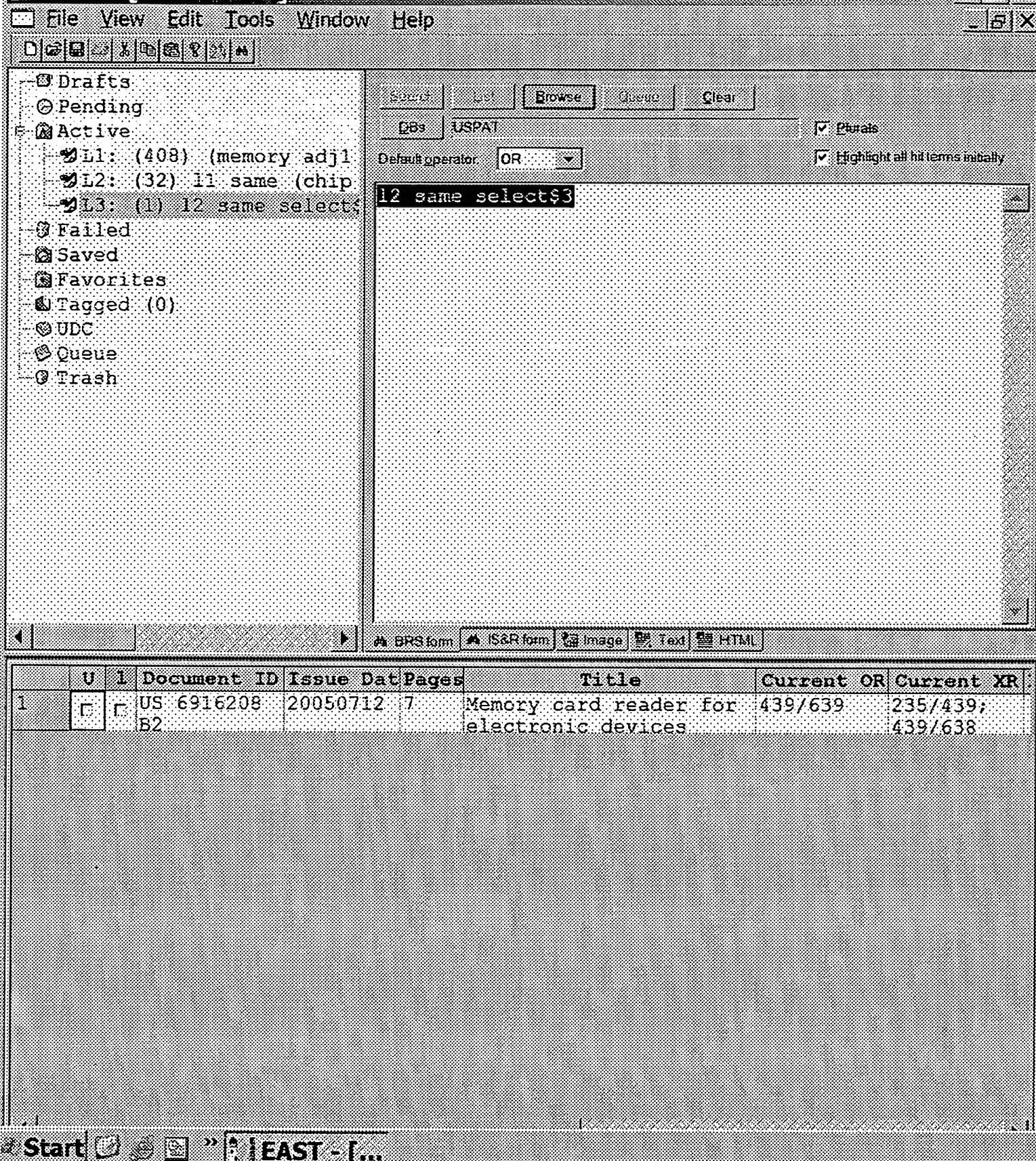
Highlight all hit items initially

Search results area

SRFormat ICSFormat Image Text HTML

Type	L #	Hits	Search Text	DBs	Time	Stam	Comment	Error	Definit	Er
1 BRS	L1	408	(memory adj1 (card or board)) same (USB or	USPA	2006/01/2	T	0 10:25			
2 BRS	L2	32	11 same (chip or IC or "integrated circuit")	USPA	2006/01/2	T	0 10:26			
3 BRS	L3	1	12 same select\$3	USPA	2006/01/2	T	0 10:26			

EAST - [Untitled1:1]



Start >> EAST - [...]

**Search Results****BROWSE****SEARCH****IEEE Xplore Guide****SUPPORT**

Results for "((memory card) and (usb or (universal serial bus))<in>metadata)"

Your search matched 3 of 1302021 documents.

A maximum of 100 results are displayed, 25 to a page, sorted by **Relevance in Descending order**.
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 Check to search only within this results set
> KeyDisplay Format: Citation Citation & Abstract**IEEE JNL** IEEE Journal or Magazine**IEE JNL** IEE Journal or Magazine**IEEE CNF** IEEE Conference Proceeding**IEE CNF** IEE Conference Proceeding**IEEE STD** IEEE Standard

Select Article Information

1. Memory device packaging - from leadframe packages to wafer level packages

Wei Koh;

High Density Microsystem Design and Packaging and Component Failure Analysis, 2004. HDP '04. Proceeding of the Sixth IEEE CPMT Conference on 30 June-3 July 2004 Page(s):21 - 24

Digital Object Identifier 10.1109/HPD.2004.1346666

[AbstractPlus](#) | Full Text: [PDF\(598 KB\)](#) [IEEE CNF](#)**2. Bad peripherals**

Arce, I.;

Security & Privacy Magazine, IEEE

Volume 3, Issue 1, Jan-Feb 2005 Page(s):70 - 73

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Qiang Peng; Jin Jing;

Consumer Communications and Networking Conference, 2004. CCNC 2004. First IEEE

5-8 Jan. 2004 Page(s):501 - 506

Digital Object Identifier 10.1109/CCNC.2004.1286912

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Memory device packaging - from leadframe packages to wafer level packages

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This paper appears in: **High Density Microsystem Design and Packaging and Component Failure Analysis, 2004. HDP '04. Proceeding of the Sixth IEEE CPMT Conference on**

Publication Date: 30 June-3 July 2004

On page(s): 21 - 24
Number of Pages: 393

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ISSN:

INSPEC Accession Number: 8109391

Digital Object Identifier: 10.1109/HPD.2004.1346666

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Abstract

The digital revolution has taken the consumer electronics by a storm in just two-short years. Portable and handheld electronics devices now have insatiable appetite for digital storage. Hence, memory cards in the form of USB Drive (U-drive), compact flash (CF), secured digital (SD), memory stick, and multimedia card (MMC) are now proliferating in the market. Moreover, the volatile memory dynamic random access memory (DRAM) for PC and notebook computing and gaming are also increasing in density and speed. With all these improvement, the memory device packaging technology is also evolving rapidly, from the traditional leadframe packages to smaller chip scale packages (CSP) and wafer level packages (WLP). This paper will cover the four major topics: (1) Review of the DRAM packages and their applications - DRAM packages are used primarily in the fabrication of DIMM modules that are inserted to the motherboards in PC and notebook computers. With newer DRAM technology in double date rate (DDR) and its second generation, DDR2, to be deployed this year, the clock rate is much higher and the number of I/Os increasing. Packages therefore are changing from the leadframe TSOP type 2 to faster CSP's such as fine pitch BGA (FBGA). (2) Review of the flash memory card packages - non-volatile memory flash and SRAM packages are generally smaller and have had lower density of 256Mb and below. But more recently high density (512Mb) and hence larger flash devices are more common. The conventional package TSOP type 1 may become inadequate to meet new performance demands and the form factor for miniaturization. Alternative new packages such as VFBGA CSP are described. (3) Stacking - 3D stacking have now been widely utilized to increase the memory density and saving weight and space. The two main options for stacking - die stack and package stack, each has its own advantages and concerns. The selection criteria and suitable applications for both the DRAM DIMM modules and various flash memory card formats are discussed in detail. (4) Future trends and conclusion - the convergence of packaging technology for the computing and consumer electronics is apparent under the same market and technology drivers - form factor miniaturization, lightweight, low profile, high speed, and high performance. Packaging for high-density memory devices is moving toward faster and smaller CSP packages, with the technology and processes for wafer level CSP and wafer level 3D stacking emerging in the horizon.

Index Terms
Inspec

Controlled Indexing

fine-pitch technology, flash memories, memory cards, notebook computers, random-access storage, stacking

Non-controlled Indexing

3D-stacking, CSP-packages, DDR2, DRAM, QMIM modules, DRAM packages, SRAM packages, USB drive, VFBGA, QSP, static scale packages, clock rate, compactflash, computing electronics, consumer electronics, die slack, digital revolution, digital storage, double data rate, dynamic random access memory, fine pitch BGA, flash memory card, packages, form factor, miniaturization, gaming applications, handheld electronics devices, high-density memory, devices, leadframe, LQFP type 2, leadframe packages, memory cards, memory density, memory device packaging, memory stick, motherboards, multimedia card, nonvolatile memory, flash, notebook computing, package stack, packaging technology, portable electronics devices, secured digital, volatile memory, wafer level CSP, wafer level packages

Author Keywords

Not Available

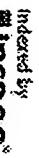
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